

What is claimed is:
CLAIMS

1. Fluid-fluid contacting apparatus in which the structured packing comprises a number of packing elements arranged in succession in the designed direction of fluid flow, each packing element comprising a plurality of crimped sheets of material arranged in face to face relationship with the corrugations extending obliquely relative to the direction of fluid flow, successive elements being arranged with the sheets in one element angularly displaced with respect to the sheets of the adjacent element(s), characterised by the provision of means at or in the vicinity of the interface between successive elements for reducing the pressure drop imposed on the continuous phase at the interface.
2. Apparatus as claimed in Claim 1 in which said means is constituted by a localised change in the configuration of the corrugations immediately adjacent the interfaces.
3. Apparatus as claimed in Claim 2 in which at least some of the sheets of each packing element have at least some corrugations whose angle of obliquity varies between opposite faces of the packing element such that the angle of obliquity is greater in the vicinity of at least one of said faces than the greatest angle of obliquity within the body of the packing element.
4. Apparatus as claimed in Claim 3 in which the corrugations have a terminal portion or portions which intersect said faces at an angle of up to 90° while the intermediate portions of each corrugation over at least part of the length thereof extend at an angle somewhat less.
5. Apparatus as claimed in Claim 3 ~~or 4~~ in which the angle of obliquity of each such corrugation changes progressively in the lengthwise direction.
6. Apparatus as claimed in ~~any one of Claims 1 to 5~~ in which at least some of the corrugations in at least some of the sheets of each packing element are formed with a reduced cross-section in the vicinity of a least one of the faces of the packing element thereby reducing the surface area and pressure drop at such location.
7. Apparatus as claimed in Claim 6 in which at least some of the corrugations have a localised reduction in depth in the vicinity of a least one of the faces of the packing element.
8. Apparatus as claimed in ~~any one of Claims 1 to 7~~ in which said means at or in the vicinity of the interface between successive elements for reducing pressure drop at the interface comprises fluid flow control means.
9. Apparatus as claimed in Claim 8 in which the successive packing elements are spaced apart from one another in the direction of bulk fluid flow through the apparatus and said fluid flow control means is located in the gap.
10. Apparatus as claimed in Claim 1 in which said means at or in the vicinity of the interface between successive elements for reducing pressure drop at the interface comprises a gap effective to produce a significant reduction in the pressure drop imposed on the continuous phase at the interface.
11. Apparatus as claimed in Claim 10 in which said gap is at least 2 cm.

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13. An element as claimed in Claim 10 in which said localised change in configuration comprises a change in the angle of obliquity in the vicinity of at least one of the faces of the element such that the angle of obliquity is greater at such location than at locations inwardly removed from said one face.

14. An element as claimed in Claim 10 in which said localised change in configuration comprises a reduction in the depth of the corrugations in the vicinity of at least one of the faces of the element.